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| EXAMINER | |
|---|---|
| CHOUDHURY, AZIZUL Q | |
| ART UNIT | PAPER NUMBER |
| 2145 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/762,226 | AALTO ET AL. | |
| | Examiner | Art Unit | |
| | AZIZUL CHOUDHURY | 2145 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *24 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

***Detailed Action***

This office action is in response to the correspondence received on September 24, 2007.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dulman (US Pat No: 5,915,008) in view of Strauss et al (US Pat No: 5,940,598), hereafter referred to as Dulman and Strauss, respectively.

1. With regards to claims 1 and 8, Dulman teaches through Straus, a method for connecting one of several customer premises equipment, or customer premises equipment, via an ATM network to one of several service providers, said method comprising: connecting each customer premises equipment to an ATM network via a corresponding network termination point (Dulman's design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman)); and forming an access server function (The CPE server (element 16b, figure 2, Dulman) combined with NAP function as an ASF), having a permanent virtual connection to each network termination point and a connection to each service provider (The NAP is attached to the AIN (element

44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman); establishing a tunneling protocol on said permanent virtual connection between each network termination point and said access server function, said tunneling protocol being able to support an integrated signaling protocol; the customer premises equipment or its user selecting an appropriate service provider by using said integrated signaling protocol (column 5, lines 26-38, Dulman); performing routing from said customer premises equipment to said selected service provider by said access server function connecting the customer premises equipment to the selected service provider using said integrated signaling protocol (The CPEs of Dulman's design access and select the service provider through a CPE server and NAP (element 16a, figure 2, Dulman) through the use of protocols (column 5, lines 26-38, Dulman)).

However, Dulman does not disclose that tunneling is possible in AIN type networks. Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced

processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

2. With regards to claims 2 and 9, Dulman teaches through Straus, the method, further comprising providing one permanent virtual connection from the access server function to each service provider

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for

providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

3. With regards to claim 3 and 10, Dulman teaches through Straus, a method, further comprising providing a pool of permanent virtual connections from the access server function to each service provider; and allocating one connection to each network termination point from said pool

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The available services (elements 48-60, figure 2, Dulman) each have their own dedicated connection allocated with the AIN (element 44, figure 2, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45,

Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

4. With regards to claims 4 and 11, Dulman teaches through Straus, a method, further comprising establishing one switched virtual connection from the access server function to each service provider, on the basis of signaling which the access server function receives from said customer premises equipment via said tunneling protocol

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The available services (elements 48-60, figure 2, Dulman) each have

their own dedicated connection path allocated with the AIN (element 44, figure 2, Dulman). The path selected is based on the service requested by the user (column 4, lines 55-64, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

5. With regards to claims 5 and 12, Dulman teaches through Straus, the method, further comprising establishing said tunneling protocol only in response to detecting appropriate activity in said customer premises equipment

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2,

Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The available services (elements 48-60, figure 2, Dulman) each have their own dedicated connection path allocated with the AIN (element 44, figure 2, Dulman). The path selected is based on the service requested by the user (column 4, lines 55-64, Dulman). The path is selected only if the user is authenticated through the firewall (column 4, lines 45-55, Dulman and element 40, figure 2, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

6. With regards to claims 6, Dulman teaches through Straus, a method, further comprising establishing said tunneling protocol permanently and initiating said integrated signaling and authenticating the user of said customer premises equipment only in response to detecting appropriate activity in said customer premises equipment

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The available services (elements 48-60, figure 2, Dulman) each have their own dedicated connection path allocated with the AIN (element 44, figure 2, Dulman). The path selected is based on the service requested by the user (column 4, lines 55-64, Dulman). The path is selected only if the user is authenticated through the firewall (column 4, lines 45-55, Dulman and element 40, figure 2, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

7. With regards to claim 7, Dulman teaches through Straus, a method, further comprising authenticating the user of said customer premises equipment both by said access server function and by the selected service provider

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The available services (elements 48-60, figure 2, Dulman) each have their own dedicated connection path allocated with the AIN (element 44, figure 2, Dulman). The path selected is based on the service requested by the user (column 4, lines 55-64, Dulman). The path is selected only if the user is authenticated through the firewall (column 4, lines 45-55, Dulman and element

40, figure 2, Dulman). After firewall verification, the user must also go through a login procedure to ensure the user is authorized to make requests (column 16, lines 48-61, Dulman).

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

8. With regards to claim 13, Dulman teaches through Straus, the network element, further comprising means for cooperating with a network termination point between itself and each customer premises equipment, said network termination point being arranged to provide a separate tunnel from itself each of several customer premises equipments and to combine the separate tunnels into fewer tunnels, from itself to the network element

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The disclosure also teaches that the design allows the NAP to be a conventional switch or an ATM switch (column 10, lines 10-43, Dulman). It is well known in the art that switches are able to combine multiple elements to fewer elements, thereby combining connections.

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

9. With regards to claim 14, Dulman teaches through Straus, the network element wherein the number of said fewer tunnels is one

(Dulman teaches a design for an advanced intelligent network (AIN) (column 4, lines 20-24, Dulman). The design features one or more CPE (element 16, figure 2, Dulman) connected to a NAP (equivalent to NT) (element 11, figure 2, Dulman). The NAP is attached to the AIN (element 44, figure 2, Dulman), which provides access to the available services (equivalent to SP) (elements 48-60, figure 2, Dulman). The AIN is capable of being an ATM (column 10, lines 58-61, Dulman). The disclosure also teaches that the design allows the NAP to be a conventional switch or an ATM switch (column 10, lines 10-43, Dulman). It is well known in the art that switches are able to combine multiple elements to fewer elements, thereby combining connections.

Strauss also teaches a design that features an AIN (column 7, lines 40-45, Strauss). The design teaches how encapsulation means are present for AIN type networks (encapsulation is equivalent to tunneling) (column 8, line 45, Strauss). In addition, Strauss also teaches how an AIN can be utilized virtually (column 13, lines 26-38, Strauss).

It would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Dulman with those of Strauss, for providing a universal or multi-purpose network server having enhanced processing functions which are performed in association with a

telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet (column 7, lines 23-30, Strauss)).

***Response to Remarks***

The amendment received on September 24, 2007 has been carefully examined but is not deemed fully persuasive. The RCE filed on January 5, 2007 has been reconsidered and is being honored thus; the Abandonment filed on June 18, 2007 is now considered moot. The following are the examiner's response to the principle concerns expressed within the remarks portion of the amendment.

The first issue of concern involves the argument, "*routing and connection of the CPE/NT to the selected SP is performed by the ASF*." The actual claim limitation cites, "*connecting each customer premises equipment to an ATM network via a corresponding network termination point; forming an access server function, having a permanent virtual connection to each network termination point and a connection to each service provider…*" Hence, the CPE connects with the NT (to create the ASF) to connect to the ATM. The connection to the ATM allows for the connection to the service provider. Dulman teaches that the CPE (element 16 within figure 2) connects to the NAP (equivalent to the NT; see figure 2, element 11). The NAP combined with the CPE server (see element 16b, figure 2) functions as the claimed ASF. The NAP is attached to the AIN (equivalent to the claimed ATM).

The second issue of concern continues to involve the location of the NAP. The applicant asserts that the NAP is not located at a customer premise location since the phrase “central office” can be affiliated with the NAP. Dulman’s design allows the NAP to be networked with the CPE. The actual physical distance separating the NAP from the CPE is not disclosed and it is well known in the art that networked devices are able to be within the premise of one another while remaining networked. Simply because two devices are said to be part of the same system (aka "central office") does not mean that the devices within that system cannot be distinct from one another.

The third issue of concern involves the connection between the CPE and the network. The claims require the CPE to connect to the network (SP) through the ASF. The applicant argues that Dulman teaches the access server, not the NAP, connecting the CPE to the AIN. The examiner disagrees. Dulman teaches in column 10 within lines 10-13, how the NAP provides the link between the CPE and the AIN (network).

The fourth issue of concern involves the term, “encapsulation.” The applicant contends that encapsulation is not equivalent to tunneling, the examiner disagrees. Based on the Fifth Edition of the Microsoft Computer Dictionary, in tunneling, "a packet based on one protocol is wrapped, or **encapsulated**, in a second packet based on whatever differing protocol is needed in order for it to travel over an intermediary network." If further evidence is required, the applicant is invited to call the examiner.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIZUL CHOUDHURY whose telephone number is (571)272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

/Jason D Cardone/
Supervisory Patent Examiner,
Art Unit 2145